LETTERS TO THE EDITOR

Cefadroxil in hyperimmunoglobulin E syndrome

EDITOR,—Hyperimmunoglobulin E syndrome (HIES) is a rare primary immunodeficiency defined by recurrent infections and markedly elevated serum immunoglobulin E (IgE) concentration. Because the primary defect in HIES is unknown, there is no specific treatment. In few cases, continuous treatment with trimethoprim sulfamethoxazole, recombinant interferon gamma or cyclosporin A have been used to reduce the serum IgE levels (up to 20%, 55%, and 95%, respectively). 1 However, adverse effects with such long term treatments have been described in children with HIES.2 We report the case of a 12 year old Caucasian girl with HIES and severe bronchiectasis treated for 3 years with oral cefadroxil, a first generation cephalosporin known for its potential direct effect on IgE production.1,3 Our patient, with daily productive cough and wheezing, suffered from six to eight bronchitis or severe pneumonias per year (Candida albicans, Haemophilus influenzae). Blood tests showed increased IgE levels (8650 IU/mL). Skin prick tests were positive to dust mites and Alternaria extracts. Pulmonary function tests showed a severe bronchial obstruction (fig 1). Bronchiectasis involved all lobes except the right middle lobe. She was treated unsuccessfully with daily chest physiotherapy, antibiotics when needed, cetirizine, inhaled budesonide, and salmeterol. Cefadroxil (Oracefal, Bristol-Myers Squibb Laboratories) was introduced at an arbitrary dose of 500 mg per day. Serum IgE quickly decreased and became stable at around 500 IU/mL (94% decrease) after 2.5 years of treatment (fig 1). Moreover, our patient became symptom free with a nearly normalised pulmonary function test. No incident or side effect was reported and our patient currently continues to receive cefadroxil.

We are the first to report such a clinical and respiratory functional improvement with cefadroxil in a paediatric patient with bronchiectasis caused by HIES. Further clinical trials are required, however moderate doses of cefadroxil should be recommended in severe HIES before using more toxic drugs.

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Cystic fibrosis mutations and disease phenotype

EDITOR,—Most patients with cystic fibrosis (CF) present in the first year of life with respiratory or gastrointestinal symptoms.1 The diagnosis can be confirmed in cases with this traditional phenotype by sweat testing. More recently, our ability to detect CF mutations and measure transpethelial electrical potential has greatly expanded the clinical spectrum.1 However, Chmiel et al, have expressed concern over basing the diagnosis of CF on the presence of two mutant alleles.2 In support of this, they cite an asymptomatic infant in whom the diagnosis of CF was not confirmed, despite a genotype of dF508/R117H. Our experience, however, does not support their argument.

Since 1989, we have performed postnatal screening for CF in Trent, and we currently screen approximately 60 000 live births a year. Screening is based on a combination of immunoreactive trypsin (IRT) on day six, with subsequent genotyping for a basket of mutations including dF508 and R117H in individuals with raised IRT levels. Three individuals with the genotype dF508/R117H have been identified by this process. They were all asymptomatic and would not have come to medical attention without screening. In all three, there was no evidence of sinopulmonary disease; all were pancreatic sufficient and sweat testing was not indicative of CF (table 1). Polythymidine tract analysis at intron 8 of the cystic fibrosis transmembrane conductance regulator (CFTR) gene demonstrated a 7T/9T background predictive of a non-CF phenotype.

All three subsequently developed respiratory infections with bacteria typical of CF, including Staphylococcus aureus and Haemophilus influenzae. Pseudomonas aeruginosa was isolated from two of the three, and was eradicated by standard antibiotic treatment. All had abnormal chest radiographs at one year, with changes consistent with CF.

We suggest that a typical CF phenotype cannot be ruled out in individuals with a dF508/R117H genotype, even with a 7T/9T background. These individuals, who will only be identified through screening programmes, require regular follow up with

Figure 1 Serum immunoglobulin E (IgE) levels and forced expiratory volume in one second (FEV1) values of a child with hyperimmunoglobulin E syndrome and severe bronchiectasis treated with cefadroxil (500 mg/day) for 3 years.
Table 1  Patient characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Name (initials)</th>
<th>LD</th>
<th>EO</th>
<th>RS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genotype</td>
<td></td>
<td>508/R117H</td>
<td>508/R117H</td>
<td>508/R117H</td>
</tr>
<tr>
<td>Splice site marker</td>
<td></td>
<td>7T/9T</td>
<td>7T/9T</td>
<td>7T/9T</td>
</tr>
<tr>
<td>First immunoactive trypsin</td>
<td></td>
<td>high</td>
<td>high</td>
<td>high</td>
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<tr>
<td>Second immunoactive trypsin</td>
<td></td>
<td>low</td>
<td>low</td>
<td>low</td>
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<tr>
<td>Sweat test (Na/Cl)</td>
<td></td>
<td>42/38</td>
<td>50/40</td>
<td>51/49</td>
</tr>
<tr>
<td>Pancreatic sufficient</td>
<td></td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Twelve month radiograph</td>
<td></td>
<td>abnormal</td>
<td>abnormal</td>
<td>abnormal</td>
</tr>
<tr>
<td>Haemophilus influenzae</td>
<td></td>
<td>yes</td>
<td>yes</td>
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</tr>
<tr>
<td>Staphylococcus aureus</td>
<td></td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Moraxella catarrhalis</td>
<td></td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa</td>
<td></td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

routine cultures from the airway to allow prompt identification and appropriate treatment of respiratory disease, and thus prevent progressive lung damage.

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In order to learn how to practice evidence-based child health, many people go on expensive, enjoyable week-long escapades to places such as Oxford, London, or Newcastle. Imagine if the core of these curricula was condensed into a book, graced with a pink cover and available to those without a spare $3600 in their education budget...

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Over the years, I have experienced a lifting of the spirits whenever I encounter books in the “Recent advances in paediatrics” series, and the year 2000 edition is the eighteenth in the succession, which suggests that many paediatricians, young and old, find the series worth acquiring.

The formula is simple: a dozen or so essays on a topical matter by an acknowledged expert in a field, often written with the assistance of a junior colleague, followed by a review of the recent papers with pithy one sentence summaries.

For anthologies such as these to succeed, the essays must attract the interest of readers who are not experts in the topics covered, be capable of being read in a single session, must have something more than can be found in review articles in the journals, and, most of all, be written by experts who can communicate their messages with clarity and enthusiasm, so that the reader is left not just better informed, but enthusiastic and resolved to put the new knowledge to practical use as soon as the opportunity arises.

Being an anthology, the standard of presentation is variable: some authors get their messages across better than others.

Those who have attended John Stephenson’s sessions on reflex array seizures at the RCPCH meetings will recognise his enthusiastic, but somewhat inchoate style. Rennie and Boylan’s essay on neonatal seizures is good, and so is Channanavakaj and Poonyan’s review of current ideas regarding the genesis and treatment of hypoxic ischaemic encephalopathy, although there isn’t much new information that will assist the practising paediatrician with the management of an asphyxiated infant.

Selvadurai and Fitzgerald give a simple traversal of the methods of measuring oxygen in the blood, and Brand is very good on the value of flow-volume curve.

The three articles on psychological topics: family support when a child is critically ill, autism, and cognitive behavioural treatment are less gripping, if informative... By contrast, the essays that could have benefited from more vigorous editing: a paragraph of 41 lines does not lend itself to easy reading...

Non-accidental injury of children makes for uncomfortable reading, yet Shoulidice and Huyer give an excellent review of the mechanism and recognition of non-accidental rib fractures, and Levin’s essay on retinal haemorrhages and child abuse is really a one page monograph. He gives clear information regarding the relationship between retinal haemorrhages and birth injury, and emphasises that if the haemorrhages are present later than six weeks after birth, the baby is likely to be a victim of shaking.

I was fascinated by Levin’s explanation of why the woodpecker does not suffer retinal haemorrhages, but magnificent as his essay is, like Wagner’s “Ring”, it would have been better had it been somewhat shorter...

This is all good stuff, although the crisp summaries of more than 300 papers and reviews demonstrate a capacity for brevity and clarity which, if understood by some of the authors of these “recent advances”, would have made this good book even better.

ROB PHILLIPS
Senior Editor, Evidence-based on call

Books


Given the growing concern among paediatricians that the Children Act 1989 is failing severely abused and neglected children, the publication of this book is timely and welcome. It is one of a series of 20 publications, “Studies in Evaluating the Children Act 1989”, produced by the Thomas Coram Research Unit, Institute of Education, University of London. Drawing on both quantitative and qualitative research data, the book looks at three main areas: trends in the use of experts, the role of the legally appointed guardian, and the role of experts in care proceedings.

Not surprisingly, there has been an increase in the use of experts since 1989, with psychiatrists being most frequently called as experts (41% of cases), followed closely by paediatricians (35% of cases). However, the report that most cases involving expert evidence are neither controversial nor complex, and that cases involving contradictory evidence are few. Interestingly, when conflicting opinions do arise between experts they tend to involve...
mental health specialists and centre on the proposed care plan rather than the necessity of a care order.

Guardians see themselves, as do the courts, as experts in the field of social work and child care matters. Most guardians see themselves as competent to assess attachment and bonding, undertake risk assessment, identify mental health issues, and identify expert clinicians. Overall, guardians are most likely to instruct child and adolescent psychiatrists. Most are not satisfied with locally based child and family mental health services and tend to instruct experts from a small “elite” with considerable experience of legal proceedings who work on a national basis. The authors note that these experts are unlikely to be able to offer any treatment to the children they are asked to see.

The final study reported in the book examines the views and experiences of child and adolescent psychiatrists. The findings are revealing and concerning. Child and adolescent psychiatrists working in this field do so outside of the National Health Service, and as such are not accountable. The psychiatrists interviewed freely admit that there is no consistent theoretical perspective underpinning their approach to child protection litigation—their approach is described as “eclectic”. Perhaps most disturbing of all, is the conclusion that without this unaccountable and eclectic elite, the system would collapse.

With regard to implications for future policy, the authors highlight the inherent tensions in the “welfare versus justice” approach to litigation and in the “forensic versus therapeutic” psychiatric approach, but are less clear as to the best way forward.

This book is well written and informative, but given the lack of paediatric input, cannot tell us where we should go from here. Speight and Wynne have given us a wake up call. This book suggests to me that it’s time to smell the coffee.

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NOTICE

Notice of duplicate publication

We have learned that the following published papers contain identical text:


Professor Milla informs us he had no knowledge that the paper citing him as author had appeared in the East African Medical Journal until informed by ourselves earlier this year. We have not been able to trace Dr Ojuawo to obtain his comments.
